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FAX 420-9210

924-9290

(503) 906-9200 FAX 906-9210 (541) 383-9310 FAX 382-7588

# **CHAIN OF CUSTODY REPORT**

Work Order #: M1 06088

| CLIENT: BRISTOL               |                       |       |        |    | INVO   | ICE TO | ):   |        |                 | 1        | -    |   |      |        | TURN                         |               | D REQUEST          | in Business I     | ays*   |  |
|-------------------------------|-----------------------|-------|--------|----|--------|--------|------|--------|-----------------|----------|------|---|------|--------|------------------------------|---------------|--------------------|-------------------|--------|--|
| REPORT TO: AME                | KRANAWETT             | ER    |        |    | BR     | ST     | 10   | _      |                 |          |      |   |      |        | Organic & Inorganic Analyses |               |                    |                   |        |  |
| ADDRESS: AMCHIT               |                       |       | <      |    |        |        |      |        |                 |          |      | 10         7         5         4         3         2         1         <1 |      |        |                              |               |                    |                   |        |  |
| PHONE: 907-770-               | 0974 FAX:             | 770.  | 09     | 75 | P.O. N | UMBE   | R: 2 | 09     | 0               |          |      |   |      |        | 5                            |               | 3 2                | 1 < 1             | 1      |  |
| PROJECT NAME:                 |                       |       |        |    |        |        |      | ED ANA |                 | 3        |      |   |      |        | ST                           | D.            | Please             | Specify           | -      |  |
| PROJECT NUMBER: 21            | 40                    |       | 0      |    |        |        |      |        |                 |          |      |   |      |        |                              | ОТН           |                    | Specify.          |        |  |
| SAMPLED BY: ARK               | 1cem                  |       | 3      |    |        |        |      |        |                 |          |      |   |      |        | *Turnare                     | ound Requests | less than standard | may incur Rush Cl | arges. |  |
| CLIENT SAMPLE IDENTIFICATION  | SAMPLING<br>DATE/TIME | 8     | 8TEX   |    |        |        |      |        | 1               |          |      |   |      |        | MATRIX<br>(W, S, O)          | # OF<br>CONT. | COM                | MENTS             | NCA WO |  |
| 101Amc23065L                  | / -                   | -     | -      |    |        |        |      |        |                 |          |      |   |      |        | 5                            | 2             | COM                | MENTS             | ID     |  |
| 2.0/AMC23075L                 |                       |       | income |    |        |        |      | 9      |                 |          |      |   |      |        | 5                            | 2             |                    |                   |        |  |
| 3.01 AMC23085L                | 6/20/01 172           |       | -      |    |        |        |      |        |                 |          |      |   |      |        | 2                            | 2             | Trip               | Blank             |        |  |
| 4.                            |                       |       |        |    |        |        |      |        |                 |          |      |   |      |        |                              |               |                    | i de              |        |  |
| 5.                            |                       | Cas   |        |    |        |        |      |        |                 |          |      |   |      |        |                              |               |                    |                   |        |  |
| 6.                            |                       |       |        |    |        |        |      |        |                 |          |      |   |      |        |                              |               |                    |                   |        |  |
| 7.                            |                       |       |        |    |        |        |      | ,      |                 |          |      |   |      |        |                              |               |                    |                   |        |  |
| 8.                            |                       |       |        |    |        |        |      |        |                 |          |      |   |      |        | ×                            |               |                    |                   |        |  |
| 9.                            |                       |       |        |    |        |        |      |        |                 |          | ,    |   |      |        |                              |               |                    |                   |        |  |
| 10.                           |                       |       |        |    |        |        |      |        |                 |          |      |   |      |        |                              |               |                    |                   |        |  |
| 11.                           |                       |       |        |    |        |        |      |        |                 |          |      |   |      |        |                              |               |                    |                   |        |  |
| 12.                           |                       |       |        |    |        | ,,,    |      |        |                 |          |      |   |      |        |                              | ,             |                    |                   |        |  |
| 13.                           |                       |       |        |    |        |        |      |        |                 |          |      |   |      |        |                              |               |                    |                   | *      |  |
| 14.                           |                       |       |        | ,  |        |        |      |        |                 | <i>5</i> |      |   |      |        |                              |               |                    |                   | ,      |  |
| 15.                           | nall                  |       |        |    |        | _      |      |        |                 |          |      |   |      |        |                              |               |                    |                   | 111    |  |
| RELINQUISHED BY:  PRINT NAME: | Taushall FIRM         | ROIS  | 310    | 1  | DATE:  | 6.28   |      |        | VED BY<br>NAME: | U        | ruf? | rad   | a R. | rad    | LL_FIRM:                     | NCA           |                    | DATE:<br>TIME:    | 17/10  |  |
| RELINQUISHED BY:              |                       | WIT - |        |    | DATE:  |        |      |        | VED BY          |          | 1    | 7100  | ) (  | 1 0001 | T IICIVI.                    | 1 - 11.       |                    | DATE:             | 1792   |  |
| PRINT NAME:                   | FIRM:                 |       |        |    | TIME:  |        |      | PRINT  | NAME:           |          |      |   |      |        | FIRM:                        |               |                    | TIME:             |        |  |
| ADDITIONAL REMARKS:           |                       |       |        |    |        |        |      |        |                 |          |      |   |      |        |                              |               | TEM                | IP:               | / 1    |  |
| COC REV 3/99                  |                       |       |        |    |        |        |      |        |                 |          |      |   |      |        |                              |               | Gi                 | P:<br>PAGE        | OF     |  |



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6 December, 2001

Anne Kranawetter Bristol Environmental & Engineering 2000 W International Airport C#1 Anchorage, AK 99502-1116

RE: Amchitka

Enclosed are the results of analyses for samples received by the laboratory on 06/28/01 17:42. If you have any questions concerning this report, please feel free to contact me.

This report was recreated from a previously issued final report in order to provide an electronic copy. The final report used for these electronic copies may have been previously issued as an amended report due to client requested changes to sample names, etc. No data has changed since submission of the previously issued final, or amended, report.

Sincerely,

Stephen Wilson

**Environmental Group Leader** 

112

Work Orders included in this report:

M106088



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Bristol Environmental & Engineering Project: Amchitka 2000 W International Airport C#1 Project Number: 21090

Reported:

06/30/01 09:47

Anchorage, AK 99502-1116 Project Manager: Anne Kranawetter

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID   | Laboratory ID | Matrix | Date Sampled   | Date Received  |
|-------------|---------------|--------|----------------|----------------|
| 01AMC2306SL | M106088-01    | Soil   | 06/28/01 17:20 | 06/28/01 17:42 |
| 01AMC2307SL | M106088-02    | Soil   | 06/28/01 17:22 | 06/28/01 17:42 |
| 01AMC2308SL | M106088-03    | Soil   | 06/28/01 17:24 | 06/28/01 17:42 |

C.O.C.# 123

North Creek Analytical - Mobile Lab



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Bristol Environmental & Engineering 2000 W International Airport C#1

Project: Amchitka
Project Number: 21090

**Reported:** 06/30/01 09:47

Anchorage, AK 99502-1116

Project Manager: Anne Kranawetter

Diesel Hydrocarbons (C10-C25) per AK102

### Diesel Hydrocarbons (C10-C25) per AK102 North Creek Analytical - Mobile Lab

| Analyte                       | Result | Reporting<br>Limit | Units     | Dilution | Method      | Prepared    | Analyzed      | Batch   | Notes |
|-------------------------------|--------|--------------------|-----------|----------|-------------|-------------|---------------|---------|-------|
| 01AMC2306SL (M106088-01) Soil |        |                    |           |          | Sampled: 06 | /28/01 Rece | eived: 06/28/ | 01      |       |
| <b>Diesel Range Organics</b>  | 3540   | 150                | mg/kg dry | 1        | AK 102      | 06/29/01    | 06/29/01      | 0106104 |       |
| Surr: 1-Chlorooctadecane      | 102 %  | 50-150             |           |          |             |             |               |         |       |
| Surr: Triacontane             | 137 %  | 50-150             |           |          |             |             |               |         |       |
| 01AMC2307SL (M106088-02) Soil |        |                    |           |          | Sampled: 06 | /28/01 Rece | eived: 06/28/ | 01      |       |
| Diesel Range Organics         | ND     | 150                | mg/kg dry | 1        | AK 102      | 06/29/01    | 06/29/01      | 0106104 |       |
| Surr: 1-Chlorooctadecane      | 89.5 % | 50-150             |           |          |             |             |               |         |       |
| Surr: Triacontane             | 140 %  | 50-150             |           |          |             |             |               |         |       |

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Bristol Environmental & Engineering
2000 W International Airport C#1 Project

Project Number: 21090

Project: Amchitka

Reported:

Anchorage, AK 99502-1116 Project Manager: Anne Kranawetter

06/30/01 09:47

## BTEX,MTBE and Naphthalene per EPA Method 8021B North Creek Analytical - Mobile Lab

| Analyte                       | Result | Reporting<br>Limit | Units         | Dilution | Method       | Prepared    | Analyzed      | Batch   | Notes |
|-------------------------------|--------|--------------------|---------------|----------|--------------|-------------|---------------|---------|-------|
| 01AMC2306SL (M106088-01) Soil |        |                    |               |          | Sampled: 06/ | /28/01 Rece | eived: 06/28/ | 01      |       |
| Benzene                       | ND     | 0.0789             | mg/kg dry     | 50       | !1B BTEX/MT  | Π 06/29/01  | 06/29/01      | 0106102 |       |
| Toluene                       | ND     | 0.316              | "             | "        | "            | "           | "             | "       |       |
| Ethylbenzene                  | ND     | 0.316              | "             | "        | "            | "           | "             | "       |       |
| Xylenes (total)               | ND     | 0.631              | "             | "        | "            | "           | "             | "       |       |
| Naphthalene                   | ND     | 3.16               | "             | "        | "            | "           | "             | "       |       |
| Surr: 4-BFB                   | 90.8 % | 50-150             |               |          |              |             |               |         |       |
| 01AMC2307SL (M106088-02) Soil |        |                    |               |          | Sampled: 06/ | /28/01 Rece | eived: 06/28/ | 01      |       |
| Benzene                       | ND     | 0.0821             | mg/kg dry     | 50       | !1B BTEX/MT  | Π 06/29/01  | 06/29/01      | 0106102 |       |
| Toluene                       | ND     | 0.329              | "             | "        | "            | "           | "             | "       |       |
| Ethylbenzene                  | ND     | 0.329              | "             | "        | "            | "           | "             | "       |       |
| Xylenes (total)               | ND     | 0.657              | "             | "        | "            | "           | "             | "       |       |
| Naphthalene                   | ND     | 3.29               | "             | "        | "            | "           | "             | "       |       |
| Surr: 4-BFB                   | 102 %  | 50-150             |               |          |              |             |               |         |       |
| 01AMC2308SL (M106088-03) Soil |        |                    |               |          | Sampled: 06/ | 28/01 Rece  | eived: 06/28/ | 01      |       |
| Benzene                       | ND     | 0.137              | mg/kg dry     | 50       | !1B BTEX/MT  | Π 06/29/01  | 06/29/01      | 0106102 |       |
| Toluene                       | ND     | 0.548              | "             | "        | "            | "           | "             | "       |       |
| Ethylbenzene                  | ND     | 0.548              | "             | "        | "            | "           | "             | "       |       |
| Xylenes (total)               | ND     | 1.10               | "             | "        | "            | "           | "             | "       |       |
| Naphthalene                   | ND     | 5.48               | "             | "        | "            | "           | "             | "       |       |
| Surr: 4-BFB                   | 98.5 % | 50-150             | - <del></del> |          |              |             |               |         |       |

North Creek Analytical - Mobile Lab



Bristol Environmental & Engineering

2000 W International Airport C#1

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Project: Amchitka

Reported:

Anchorage, AK 99502-1116 Project Manager: Anne Kranawetter

06/30/01 09:47

# Physical Parameters per APHA/ASTM/EPA Methods North Creek Analytical - Mobile Lab

Project Number: 21090

| Analyte                       | Result | Reporting<br>Limit | Units     | Dilution | Method        | Prepared   | Analyzed      | Batch   | Notes |
|-------------------------------|--------|--------------------|-----------|----------|---------------|------------|---------------|---------|-------|
| 01AMC2306SL (M106088-01) Soil |        |                    |           |          | Sampled: 06/  | 28/01 Rece | ived: 06/28/0 | 01      |       |
| % Solids                      | 80.8   | 0.0100 %           | by Weight | 1        | Gravimetric   | 06/29/01   | 06/30/01      | 0106103 |       |
| 01AMC2307SL (M106088-02) Soil |        |                    |           |          | Sampled: 06/  | 28/01 Rece | ived: 06/28/0 | 01      |       |
| % Solids                      | 91.2   | 0.0100 %           | by Weight | 1        | Gravimetric   | 06/29/01   | 06/30/01      | 0106103 |       |
| 01AMC2308SL (M106088-03) Soil |        |                    |           |          | Sampled: 06/2 | 28/01 Rece | ived: 06/28/0 | 01      |       |
| % Solids                      | 100    | 0.0100%            | by Weight | 1        | Gravimetric   | 06/29/01   | 06/30/01      | 0106103 |       |

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Bristol Environmental & Engineering 2000 W International Airport C#1

Project: Amchitka
Project Number: 21090

**Reported:** 06/30/01 09:47

Anchorage, AK 99502-1116

Project Manager: Anne Kranawetter

#### Diesel Hydrocarbons (C10-C25) per AK102 - Quality Control

#### North Creek Analytical - Mobile Lab

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |
|         |        |           |       |       |        |      |        |     |       |       |

| Blank (0106104-BLK1)       |      |                | Prepare | d & Analy | zed: 06/2 | 29/01  |      |    |      |
|----------------------------|------|----------------|---------|-----------|-----------|--------|------|----|------|
| Diesel Range Organics      | ND   | 150 mg/kg wet  |         |           |           |        |      |    |      |
| Surr: 1-Chlorooctadecane   | 24.3 | "              | 23.4    |           | 104       | 50-150 |      |    |      |
| Surr: Triacontane          | 17.7 | "              | 23.4    |           | 75.6      | 50-150 |      |    |      |
| LCS (0106104-BS1)          |      |                | Prepare | d & Analy | zed: 06/2 | 29/01  |      |    |      |
| Diesel Range Organics      | 1410 | 150 mg/kg wet  | 1250    |           | 113       | 75-125 |      |    |      |
| Surr: 1-Chlorooctadecane   | 23.8 | "              | 23.4    |           | 102       | 50-150 |      |    |      |
| Surr: Triacontane          | 16.9 | "              | 23.4    |           | 72.2      | 50-150 |      |    |      |
| LCS Dup (0106104-BSD1)     |      |                | Prepare | d & Analy | zed: 06/2 | 29/01  |      |    |      |
| Diesel Range Organics      | 1450 | 150 mg/kg wet  | 1250    |           | 116       | 75-125 | 2.80 | 20 |      |
| Surr: 1-Chlorooctadecane   | 29.2 | "              | 23.4    |           | 125       | 50-150 |      |    |      |
| Surr: Triacontane          | 16.7 | "              | 23.4    |           | 71.4      | 50-150 |      |    |      |
| Matrix Spike (0106104-MS1) | Sour | ce: M106088-01 | Prepare | d & Analy | zed: 06/2 | 29/01  |      |    |      |
| Diesel Range Organics      | 4430 | 150 mg/kg dry  | 1550    | 3540      | 57.4      | 60-140 | •    | •  | Q-03 |
| Surr: 1-Chlorooctadecane   | 36.3 | "              | 29.0    |           | 125       | 50-150 |      |    |      |
| Surr: Triacontane          | 39.4 | "              | 29.0    |           | 136       | 50-150 |      |    |      |

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Bristol Environmental & Engineering 2000 W International Airport C#1

Project: Amchitka
Project Number: 21090

Reported:

Anchorage, AK 99502-1116

Project Manager: Anne Kranawetter

06/30/01 09:47

#### BTEX,MTBE and Naphthalene per EPA Method 8021B - Quality Control

### North Creek Analytical - Mobile Lab

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Batch 0106102 - MeOH Extraction | n    |            |             |                |        |  |
|---------------------------------|------|------------|-------------|----------------|--------|--|
| Blank (0106102-BLK1)            |      |            | Prepared &  | Analyzed: 06/2 | 9/01   |  |
| Benzene                         | ND   | 0.0250 mg/ | kg wet      |                |        |  |
| Toluene                         | ND   | 0.100      | "           |                |        |  |
| Ethylbenzene                    | ND   | 0.100      | "           |                |        |  |
| Xylenes (total)                 | ND   | 0.200      | "           |                |        |  |
| Naphthalene                     | ND   | 1.00       | "           |                |        |  |
| Surr: 4-BFB                     | 2.30 |            | " 2.50      | 92.0           | 50-150 |  |
| LCS (0106102-BS1)               |      |            | Prepared &  | Analyzed: 06/2 | 9/01   |  |
| Benzene                         | 2.13 | 0.0250 mg/ | kg wet 2.50 | 85.2           | 69-138 |  |
| Toluene                         | 2.26 | 0.100      | " 2.50      | 90.4           | 53-151 |  |
| Ethylbenzene                    | 2.59 | 0.100      | " 2.50      | 104            | 61-141 |  |
| Xylenes (total)                 | 7.28 | 0.200      | " 7.50      | 97.1           | 62-141 |  |
| Naphthalene                     | 3.20 | 1.00       | " 2.50      | 128            | 65-135 |  |
| Surr: 4-BFB                     | 2.65 |            | " 2.50      | 106            | 50-150 |  |

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Project Number: 21090

Reported:

Anchorage, AK 99502-1116

Project Manager: Anne Kranawetter

Project: Amchitka

Portland

06/30/01 09:47

#### **Notes and Definitions**

Q-03 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte

already present in the sample.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.

wet Sample results reported on a wet weight basis (as received)

RPD Relative Percent Difference

North Creek Analytical - Mobile Lab

### **Items for Project Manager Review**

| LabNumber   | Analysis    | Analyte               | Exception                                     |
|-------------|-------------|-----------------------|---|
|             |             |                       | Report recreated from:                        |
|             |             |                       | \\sisters\elmnt\Report\M106088 FINAL 06 30 01 |
|             |             |                       | 0947.mdb                                      |
|             |             |                       | Default Report (not modified)                 |
| 0106104-MS1 | AK102 (DRO) | Diesel Range Organics | Q-03  |
| 0106104-MS1 | AK102 (DRO) | Diesel Range Organics | Exceeds lower control limit                   |